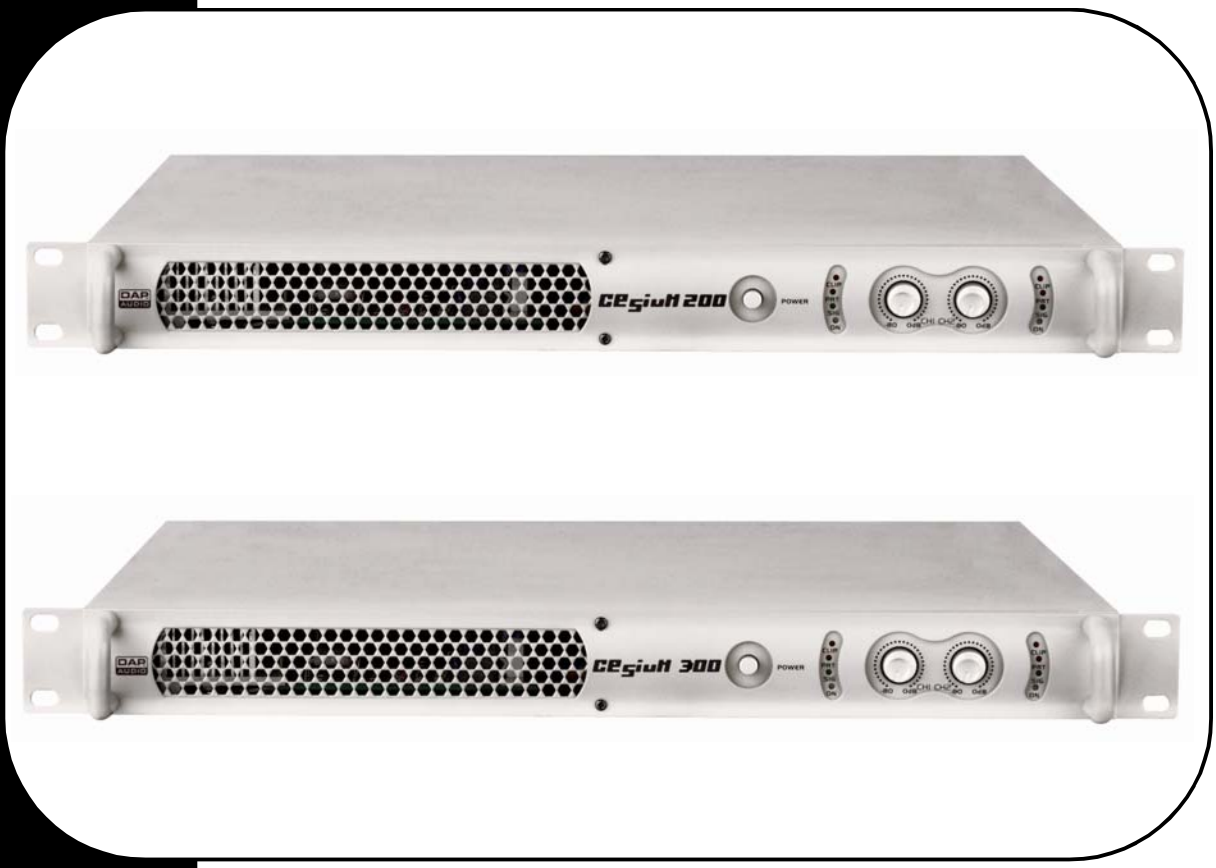
Cesium

Cesium 200 **ORDERCODE D4160**
Cesium 300 **ORDERCODE D4161**



SHOWELECTRONICS FOR PROFESSIONALS

Congratulations!
You have bought a great, innovative product from DAP Audio.
The DAP Audio Cesium series bring excitement to any venue. Whether you want simple plug-&-play action or a sophisticated show, this product provides the effect you need.

You can rely on DAP Audio, for more excellent audio products.
We design and manufacture professional audio equipment for the entertainment industry.
New products are being launched regularly. We work hard to keep you, our customer, satisfied.
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You can get some of the best quality, best priced products on the market from DAP Audio.
So next time, turn to DAP Audio for more great audio equipment.
Always get the best -- with DAP Audio !

Thank you!

DAP Audio

DAP Audio Cesium 200, 300 Product Guide

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WARNING

CAUTION!

Keep this system away from rain and moisture!

FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOUR INITIAL START-UP!

SAFETY INSTRUCTIONS

Every person involved with the installation, operation and maintenance of this system has to:

- be qualified
- follow the instructions of this manual

CAUTION! Be careful with your operations.
With a dangerous voltage you can suffer
a dangerous electric shock when touching the wires!

Before you initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the system.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the system are not subject to warranty.

This system contains no user-serviceable parts. Refer servicing to qualified technicians only.

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the system.

- Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution!
- Never remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.
- Do not insert objects into air vents.
- Do not connect this system to a dimmerpack.
- Do not switch the system on and off in short intervals, as this would reduce the system's life.
- Do not open this device. Risk: hazardous radiation exposure.
- Do not run the output of any amplifier channel, back into another channel's input.
- Do not connect (parallel or series) an amplifier output with any other amplifier output.
- Only use system indoor, avoid contact with water or other liquids.
- Avoid flames and do not put close to flammable liquids or gases.
- Always disconnect power from the mains, when system is not used. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.
- Make sure you don't use the wrong kind of cables or defective cables.
- Make sure that the signals into the mixer are balanced, otherwise hum could be created.
- Make sure you use DI boxes to balance unbalanced signals; All incoming signals should be clear.
- Make sure that the available voltage is not higher than stated on the rear panel.

- Make sure that the power-cord is never crimped or damaged. Check the system and the power-cord from time to time.
- Always operate the unit with the AC ground wire connected to the electrical system ground.
- Connecting amplifier outputs to oscilloscopes or other test equipment, while the amplifier is in bridged mode, may damage both the amplifier and test equipment.
- Do not drive the inputs with a signal level bigger, than required to drive the equipment to full output.
- In system setup, the amplifier's output power must be 50%-100% more than the loaded loudspeakers rated power.
- Please turn off the power switch, when changing the power cord or signal cable, or select the input mode switch.
- In typical use, Please set the volume to 0dB position.
- Sometimes, when you want to send one signal to more than one amplifier, you should use a signal distributor.
- For replacement use fuses of same type and rating only.
- Prevent distortion! Make sure that all components connected to the Cesium have sufficient power ratings. Otherwise distortion will be generated because the components are operated at their limits.
- Avoid ground loops! Always be sure to connect the power amps and the mixing console to the same electrical circuit to ensure the same phase!
- If system is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the system has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your system. Leave the system switched off until it has reached room temperature.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- WARRANTY: Till one year after date of purchase.

OPERATING DETERMINATIONS

If this system is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.
Any other operation may lead to dangers like short-circuit, burns, electric shock, etc.

You endanger your own safety and the safety of others!

Improper installation can cause serious damage to people and property !

Description of the device

Features

The Cesium 200 and 300 are professional amplifiers :

Cesium 200 and 300

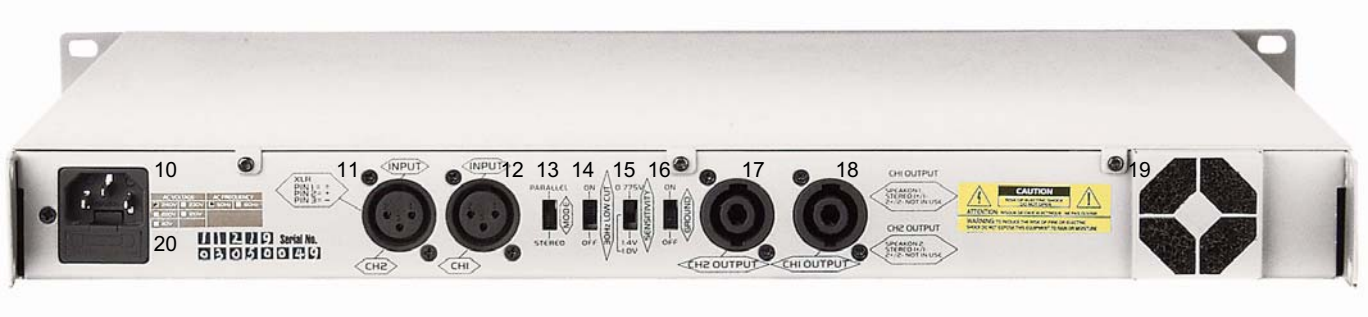
- 2x Channel in
- 2x Speakon out
- Built-in Clip Limiter
- Switch-able entrance sensitivity: 0.77V, 1V and 1.4V
- Parallel or stereo mode
- 30 Hz Hi-pass filter, -3 dB, 18 dB/oct.
- Ground-selector
- Back to front airflow
- Amplifier has softstart and separate standby power. In case of temporary power failure, the amplifier has to be restarted by pushing the ON/OFF switch again. On and off switching eventually happens with relay.

Overview

1. Handles
   Handles are used for easy transportation.
2. Air vents
   Don't obstruct or insert objects into air vents.
3. Power Button
   Use this button to switch your power amplifier on.
4. "CLIP" Indicator
   Any illumination of the red clip indicates a state of over modulation (distortion at extremely high volumes). In this case, check the output signal of your mixer and turn down the input gain control. Please keep in mind that the power amplifier cannot correct any distortion.
5. Channel 1 Volume Control
   In stereo mode, this potentiometer allows the adjustment of the channel 1 input level. (left channel). In Bridge mode, this potentiometer allows the adjustment of the two channels at the same time.
6. Channel 2 Volume Control

In stereo mode, this potentiometer allows the adjustment of the channel 2 input level. (Right channel)
In bridge mode, this potentiometer is disabled.

7. "PROTECTION" Indicator
   When this indicator lights, the power amplifier is in protection mode. Switch off the device and find out what the problem is. The power amplifier is protected against overheat, overload, short circuit, DC, soft-start.
8. "SIGNAL" Indicator
   The illumination of the LED only indicates a safe operation.
9. "POWER" Indicator
   This indicator lights when the power amplifier is switched on.



CESIUM SERIES DESCRIPTION REAR PANEL:

10. AC Socket
    Plug this cord into the power supply socket. (Before using the power amplifier, check if the power supply is 240V).
11. Channel 2 XLR Input
    This XLR input is a balanced input. Connect this input to the left output of your mixer.
12. Channel 1 XLR Input
    This XLR input is a balanced input. Connect this input to the right output of your mixer.
13. Operation Mode Selector
    This switch is used to choose the operating mode of the power amplifier:
    Stereo Mode: 2 inputs (channel 1 and 2) and 2 outputs are used.
    Parallel Mode: 1 input (channel 1) and 2 outputs are used.
14. High Pass Filter Selector
    This switch is used to cut low frequency under 30Hz (infrasound).
15. Input Sensitivity Selector
    This selector allows you, to choose the input sensitivity: 0.77V, 1.0V or 1.4V.
16. Ground Selector
    If you experience hum or noise in your speaker, put the selector in "ON" position.
17. Channel 2 Turn lock Output
    Connect this turn lock output to a speaker. The branching is +1, -1 (except in bridge mode where the branching is +1, +2).
18. Channel 1 Turn Lock Output
    Connect this turn lock output to another speaker. The branching is +1, -1.
19. Air Entrance
    This part is the air entrance. Don't obstruct it.
20. Fuse
    The fuse is used to protect your amplifier from different kinds of AC problems. If the power amplifier is "on" and nothing lights, please check the fuse compartment. If fuse is broken, please be sure to use a fuse of the same type and specification.

Installation

Remove all packing materials from the Cesium. Check that all foam and plastic padding is removed.
Screw the equipment into a 19" rack. Connect all cables.
Always disconnect from electric mains power supply before cleaning or servicing.
Damages caused by non-observance are not subject to warranty.

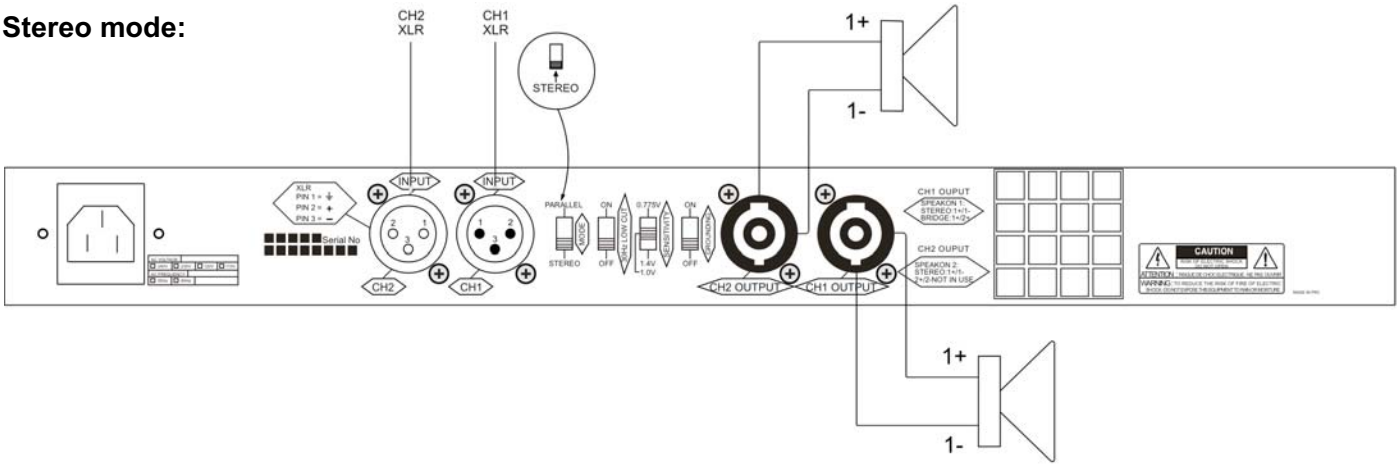
Set Up and Operation

Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 120V specification product on 240V power, or vice versa.
Install this device on a flat surface, not bending or curved.
Do not supply power before all components of the system are set up and connected properly.

You can connect the Cesium in 2 different modes: Stereo and Parallel

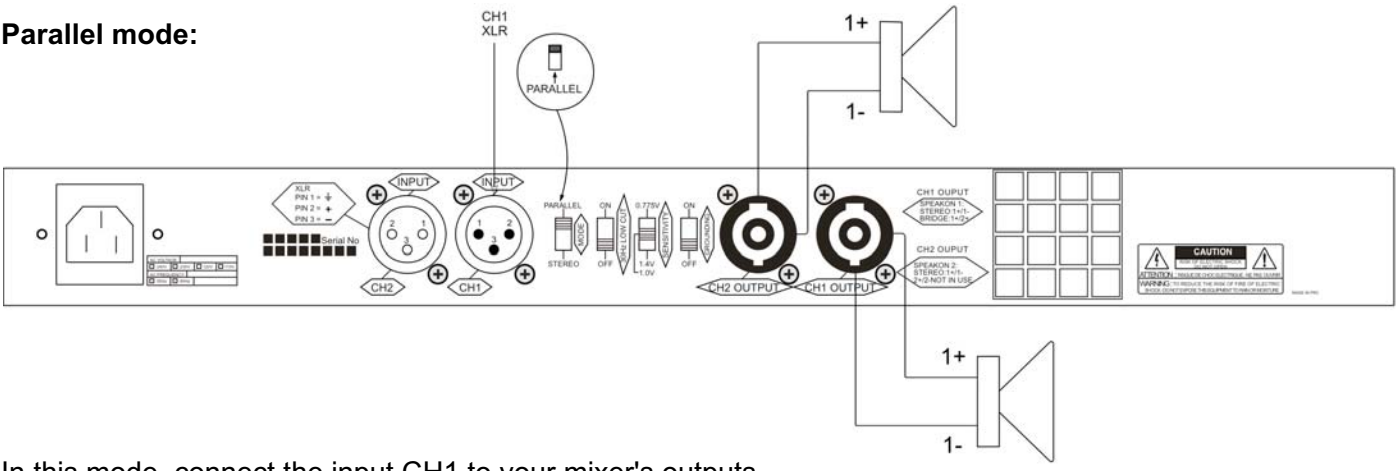
CONNECTING FOR CESIUM 200 and 300 :

Stereo mode:



In this mode, connect the 2 inputs CH1 and CH2 to your mixer's outputs.
Put the selector to the stereo position.
Output volume can be adjusted by means of the two potentiometers.
Connect the 2 turn lock outputs to the 2 speakers.

Parallel mode:



In this mode, connect the input CH1 to your mixer's outputs.
Put the selector on the parallel position.
Outputs volume can be adjusted by means of the two potentiometers.
Connect the 2 turn lock outputs to the 2 speakers.

Maintenance

The Cesium amplifier requires almost no maintenance. However, you should keep the unit clean.
Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid.
Keep connections clean. Disconnect electric power, and then wipe the audio connections with a damp cloth.
Make sure connections are thoroughly dry before linking equipment or supplying electric power.
Please clean the dust filter every 15 days.

Replacing a Fuse

Power surges, short-circuit or inappropriate electrical power supply may cause a fuse to burn out. If the fuse burns out, the product will not function whatsoever. If this happens, follow the directions below to do so.

1. Unplug the unit from electric power source.
2. Insert a flat-head screwdriver into the slot in the fuse cover. Gently pry up the fuse cover.
3. Remove the broken fuse. If brown or unclear, it is burned out.
4. Insert the replacement fuse into the holder where the old fuse was. Reinsert the fuse cover.
Be sure to use a fuse of the same type and specification. See the product specification label for details.

Troubleshooting

Dap Audio Cesium 200 and 300

This troubleshooting guide is meant to help solve simple problems.
If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.
If the amplifier does not operate properly, refer servicing to a technician.

1. If you experience low output or no output at all, unplug immediately.
2. Check the fuse, power from the wall, all cables etc.
3. If all of the above appears to be O.K., plug the unit in again.
4. If you are unable to determine the cause of the problem, do not open the amplifier, as this may damage the unit and the warranty will become void.
5. Return the amplifier to your Dap Audio dealer.

Product Specifications

MODEL	CESIUM 200	CESIUM 300
8ohm Stereo Power	70W	100W
4ohm Stereo Power	105W	150W
Freq. Resp (+0/ 0.3,1W/8ohm)	20Hz-20KHz, -3dB@100KHz	
THD+N	<0.05%	<0.05%
Slew Ratio	40V/μs	40V/μs
DAMPING Factor	>200	>200
S/N Ratio	>95dB	>95dB
Input sensitivity	0.775V, 1V, 1.4V	
Input imped.(bal/unbal.)	20KΩ / 10KΩ	
Protection	overheat, short circuits, DC, limit and softstart, Output Relay-Zero Current Switch, Intellectual Clip Limiter.	
Voltage	AC 240V-50Hz (CE)	
Crosstalk	>80dB	>80dB
Gross Weight	13.9KG	14.3KG
Dimensions (mm)	483x490x44.5 (LxWxH)	483x490x44.5 (LxWxH)

Design and product specifications are subject to change without prior notice.

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